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OLDEST BEE PAPER IN AMERICA

THOMAS G. NEWMAN,
EDITOR.

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APICULTURAL NEWS ITEMS.

EDITORIAL AND SELECTED.

Why doth the violet spring
Unseen by human eye?
Why do the radiant seasons bring
Sweet thoughts that quickly fly:
Why do our fond hearts cling
To things that die?
O life! this is thy song,
"Endure and—die?"

Happy New Year!—We earnestly wish one and all of our readers a Happy New Year, and may prosperity and happiness attend all their laudable undertakings throughout the year.

The Year is Ended. If this life is the corner-stone of the future, should we not use all our endeavors to have it *plumb* and *square*?

During the Year 1885 we have inserted 175 queries in the Query Department, with answers by some of our best apiarists. This alone has been worth more than the subscription price of the BEE JOURNAL to almost every subscriber, because it gives the opinions of 8 or 10 successful apiarists on each topic. "In the multitude of counsel there is wisdom." The answers vary, because in many cases the matters treated upon are simply matters of *opinion*, and show enough difference to make it thoroughly interesting. Those who have so kindly aided in this Department, have the thanks of our readers generally. The Query Department will be continued next year under the same plan of management.

A Complete Index will be found in this number of the JOURNAL, both to the subject-matter, correspondents' names, and illustrations. To these we point with pride, because they comprise the whole range of apicultural discussion, as well as current news of our pursuit. The Index to Correspondents contains the names of all our best, most experienced and thoroughly successful writers of the present day. These will all be continued for the coming year, and our arrangements now perfected for the future will make the BEE JOURNAL for 1886 better than all its preceding years. In fact, no bee-keeper can afford to do without it.

This Number closes another Volume of the AMERICAN BEE JOURNAL, rears one more monument upon the broad area of industrial improvement, and creates one more "book of reference" on progressive apiculture.

The AMERICAN BEE JOURNAL was, in 1861, conceived in a laudable desire to do good to a languishing industry, it has been conducted with the sole view of promoting the welfare of its patrons, and is dedicated to the interests of honey-producers generally.

It should be remembered that it was the first periodical that claimed for bee-culture its rights as a science. It raised a torch-light, which for years gleamed alone amid the dark mists of ignorance and prejudice, and now, when it has given birth to other lights, it is still burning with a pure and brilliant flame.

For the past 12 years its present editor has labored diligently for the interests of apiarists, and still hopes, by persistent toil, to advance the practical science of modern apiculture, and thus to carry out the plans of his honored predecessor, Mr. Samuel Wagner, who first conceived the idea of publishing a periodical devoted to bee-culture in America. Since then much progress has been made—many doubtful problems have been solved, and new ideas promulgated; all the standard works on apiculture have been revised time and again, as published experiences have proven to the several authors that their books inclined to error, and none but the most conceited have dared to assume that they knew it all.

We desire not only that every present subscriber will promptly remit for the coming year, but also that each one will convince his bee-keeping friend or neighbor that it is to his *interest* to join in a club, at least of two, and thus spread the light of its torch, so that so many more may be benefited thereby.

It is to the interest of every bee-keeper that his neighbor bee-keepers are educated especially as to marketing honey, that they may have the honey in attractive shape, and to know its proper selling value before attempting to sell it. This may prevent their spoiling of his market by ruining the prices or disgusting purchasers.

It will be Wisdom to invest one dollar for the Weekly AMERICAN BEE JOURNAL for 1886. With its weekly visits every subscriber will be kept posted with all the apicultural news of the day. All the new things in our ever-advancing pursuit will be placed before our readers as soon as they come to the light, and at the end of the year every subscriber will have a volume of 832 pages filled with just the kind of reading that will be of the *greatest value* to every apiarist. By the use of the Binder prepared for the BEE JOURNAL, all can have the volume bound and in good preservation every day in the year, and always up to date, ready for reference and daily examination. It surely will be *wisdom* for every bee-keeper to take the AMERICAN BEE JOURNAL for 1886. Now is the time to renew with the advent of the new year.

The American Agriculturist and the Weekly BEE JOURNAL for 1886 will both be sent for \$2.25, or with the "Family Cyclopaedia" or "Law Book," for \$2.65.

Concerning the Duty on Beeswax in Canada, on page 811 Mr. Jones was reported to have said that the Canadian Government had removed the duty, but Mr. R. F. Holtermann, of Fisherville, Ont., denies this, and says:

The subject was brought up and the Government was approached more or less directly; but just about that time we found, owing to heavy winter losses in 1884-85, that there would be no scarcity of wax for some time, and it dropped. My own opinion is, aside from all other difficulties, the idea of removing the duty on beeswax is impracticable, because, however easy to the experienced, it is no easy matter for a novice to distinguish beeswax from paraffine, ceresine, and such like. To remove the duty from beeswax, would set a premium upon frauds of all kinds, and we cannot hope or expect to remove it from all these, nor can we expect to have the Government excise men to distinguish wax from apparently similar substances.

We were not present at the last session (having left for Chicago to get the Convention report before our readers), and therefore know nothing of what was said. Perhaps Mr. Jones can straighten the matter out.

New Subscribers are coming in rapidly—for this our thanks are tendered to the friends of the AMERICAN BEE JOURNAL, who are exerting their influence in its behalf. We should thribble our list at the present low rate of *one dollar a year*. It is a popular price, and we find the reduction a popular thing with all bee-keepers.

Miss Lucy A. Wilkins declines the office of Vice-President of the North American Bee-keepers' Society for Michigan. Prof. Cook was nominated, and he then nominated Miss Wilkins, we presume as a compliment to the lady. As she declines, the office will of course devolve upon Prof. Cook.

G. B. Lewis & Co., of Watertown, Wis., are on hand with their new Catalogue for 1886—20 pages. A copy is on our desk.

Using Basswood for sections was discussed at the late Convention at Detroit. Mr. Boardman said: (see page 806.) "I use basswood for sections, but in view of its becoming scarce, and to save it for bee-keeping, can we not find some other timber to take its place?" He was erroneously reported to have said: "I never use basswood," etc. Hence this correction.

The First Convention of the bee-keepers of America was held at Cleveland, Ohio, on March 15, 1860; nearly 26 years ago. We have prepared a history of the inception, formation, and organization of the North American Bee-keepers' Society, together with a digest of the proceedings of all its meetings from its inauguration, with a full report of its last meeting at Detroit, Mich. This we are now publishing in pamphlet form. It will be ready in January, and will be sent postpaid for 25 cents. We will present a copy of it to any one sending us a club of two subscribers for one year, with \$2.00.

Bulletin No. 9, of the Michigan Agricultural College, is received. It treats of chemicals.

Silence is a strong argument, as well as a great virtue. There is no wisdom in unnecessary contention. Let us all commence the new year with the determination to see "how we can best work and best agree."



WITH

REPLIES by Prominent Apirarists.

Lengthening the Swarming Impulse.

Query, No. 173.—I notice that many have been advertising, and still advertise queens reared, through the whole season, under the swarming impulse. How is it possible to obtain this swarming impulse at will during the whole period of the queen-rearing business?—P. V.

I do not think it can be done as easily as the advertising can.—JAMES HEDDON.

It cannot be done very practically, but queens reared in full colonies are equally good at all times.—DADANT & SON.

It would be difficult, but possibly by abundant feeding and by crowding the bees, it might be accomplished. I doubt if it is much practiced.—A. J. COOK.

The queen-rearing season might be considered as beginning and ending with the swarming season. A colony may be urged into the swarming impulse earlier or later than usual, by stimulative feeding and giving brood from other colonies.—C. C. MILLER.

Colonies are built up early by giving brood and bees from others, so as to get them to swarm in advance. Late in the season the swarm is hived on frames of brood, which, with feeding, keeps the swarming fever up. Again, when a surplus of queens is given in the summer, they can be kept in small nuclei until they are wanted later.—G. M. DOOLITTLE.

It is not possible at all. I was of the impression that it was generally known that such advertisements were not intended to be taken literally. When a man advertises to do an absurd or improbable thing, the safe way is to pass him by. The swarming impulse can be lengthened out almost indefinitely by artificial means. But this process is "artificial." It is clap-trap to call it "swarming impulse." Better queens can be reared by artificial means than are produced in the natural way, because by artificial means intenseness can be added to natural desire, and the bees can be controlled as to the age of the larvae they are to nurse into queens.—G. W. DEMAREE.

It does not take long to start the swarming impulse when there is little nectar in the flowers, by stimulative feeding. Whether the impulse excited leads to the building of queen-cells or not, it is certain that with strong colonies in proper season, as valuable queens can be reared under the impulse of stimulative feeding as under the impulse of incoming nectar.—G. L. TINKER.

This "swarming impulse" is one of the tricks of the trade, and is made use of by some for the purpose of increasing trade. In very warm

climates queens may be reared during nearly the whole year, but the "swarming impulse" cannot be controlled even in such climates, much less in those where winters more or less severe always follow in regular rotation.—J. E. POND, JR.

Hive-Entrances in Winter.

Query, No. 174.—Supposing Langstroth hives to be properly packed for wintering out-of-doors in latitude north of the 45th parallel north latitude, how should the entrances be managed, as to space, in mild and in the coldest weather?—M. D. WISCONSIN.

I would leave them the same in the winter that they are in the summer.—W. Z. HUTCHINSON.

I leave my hive-entrances open the full length, and leave a board in front of the hive to keep snow and wind out.—G. M. DOOLITTLE.

I would say, leave the entrances entirely open to prevent dampness from condensing on the inner walls.—G. W. DEMAREE.

I should pick up the entrances (taking the hives with them) and place them in a cellar; but if I had to leave them out, I should contract them to about one inch in length, and leave them thus all winter and spring. If you are afraid that dead bees will fill such entrances, I think that a good cellar and good food will prevent their dying.—JAMES HEDDON.

That would depend upon whether there was upward ventilation or not. With top ventilation the entrances should be very small— $\frac{3}{8}$ x 3 inches. With lower ventilation only, the entrances should be large— $\frac{3}{8}$ x 8 inches—and protected from driving winds. I would not contract the size of the entrances until breeding began in the spring.—G. L. TINKER.

My experience leads me to give large entrances, both in mild and in the coldest weather. I winter my bees in Langstroth hives on the summer stands altogether, and I give the full width of the entrances. I have lost but 2 full colonies in many years, and both of those starved last spring, at a time when I was confined to my room with sickness.—J. E. POND, JR.

Changing the Location of an Apiary.

Query, No. 175.—My bee-yard at present has a gentle incline to the south, and is in the north part of an apple orchard, well protected from winds, but I think it is getting somewhat too shady. Next spring I contemplate moving my bees just over the ridge, having a similar descent to the north, and containing three-fourths of an acre, with no shade except three or four small pear trees, but protected by a dense belt of evergreens 15 to 20 feet high on the north and east, with a good wind-break on the west. Both yards are equally convenient to the house, and the soil is dry. Would the move be wise, or otherwise?—Northwich, Ont.

If the apple trees were properly trimmed I should prefer to let the bees remain on the south side of the ridge.—G. L. TINKER.

I think that I should leave them where they are, and thin out the shade.—C. C. MILLER.

Wise.—W. Z. HUTCHINSON.

If the shade is from apple trees only, we would leave them where they are. We do not like placing hives facing against the slope, which would be the case on the opposite hill.—DADANT & SON.

I would move them if I liked the new location best. See my answer to Query, No. 170.—G. W. DEMAREE.

I should prune the apple trees thoroughly so as to let the sunshine through them, thus benefiting both the bees and the fruit. Ground descending to the north is not a good location for an apiary.—G. M. DOOLITTLE.

I do not think that there would be any advantages gained by moving, that would overbalance the trouble caused by so doing. It is easy to prune the fruit-trees, and they will probably need such pruning. Shade from well-kept fruit-trees is an advantage, as a rule.—J. E. POND, JR.

I should rather have the southern slope on one account, if I wintered my bees out-doors; but I think I should move them, and winter them in a good cellar.—JAMES HEDDON.

If the present place is so shaded as to be damp and dark, the change would be wise. A shade-board is much to be preferred to any other shade, so the absence of shade need be no objection to the new ground.—A. J. COOK.

OUR CLUBBING LIST for 1886.

We supply the *American Bee Journal* for 1886, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	Club
The American Bee Journal	.....1 00..	
and Gleanings in Bee-Culture	.....2 00..	1 75
Bee-Keepers' Magazine	.....2 00..	1 75
Bee-Keepers' Guide	.....1 50..	1 40
The Apiculturist	.....2 00..	1 75
Canadian Bee Journal	.....2 00..	1 75
Texas Bee Journal	.....2 00..	1 75
The 7 above-named papers	.....6 50..	5 50
and City and Country	.....2 00..	1 50
New York Independent	.....4 00..	3 30
American Agriculturist	.....2 50..	2 25
American Poultry Journal	.....2 25..	1 75
and Cook's Manual	.....2 25..	2 00
Bees and Honey (Newman)	.....2 00..	1 75
Binder for Am. Bee Journal	.....1 75..	1 60
Apiary Register—100 colonies	.....2 25..	2 00
Dzierzon's Bee-Book (cloth)	.....3 00..	2 00
Dzierzon's Bee-Book (paper)	.....2 50..	2 00
Quinby's New Bee-Keeping	.....2 50..	2 25
Langstroth's Standard Work	.....3 00..	2 75
Root's A B C of Bee-Culture	.....2 25..	2 10
Alley's Queen-Rearing	.....2 50..	2 25
Farmer's Account Book	.....4 00..	3 00
Guide and Hand-Book	.....1 50..	1 30

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.



North American Bee-Keepers' Society.

We here present our readers with some of the matter omitted in the last two issues of the BEE JOURNAL:

REPORTS OF VICE-PRESIDENTS.

Mr. O. O. Poppleton, Vice-President for Iowa, made the following report of the results of bee-keeping in Iowa during the past 12 months:

Bees were put into winter quarters last fall in very poor condition generally, as regards numbers of bees in each colony and amount of stores. The winter was a very hard one, followed by one of the worst—if not the worst—springs experienced during a long term of years. The result has been to entirely destroy nearly or quite $\frac{3}{4}$ of the total number of colonies put into winter quarters last fall, and to leave many of the colonies that were saved in very poor condition at the commencement of the honey harvest.

The honey harvest itself was much below the average, and from the best information I can get, I estimate the total production of honey in Iowa, in 1885, at about $\frac{1}{4}$ the amount obtained last year.

Foul brood, which was reported last year as being present in our locality in this State, is not reported as being in existence anywhere in the State this year. What is known by some as the "trembling disease," by others as the "nameless disease," has been reported from several apiaries this year. As the causes and characteristics of this disease, as well as its prevention and cure, has never, so far as I know, been thoroughly investigated by any competent person, I would respectfully request that this Society either appoint a committee to make such an investigation, or formally request Prof. N. W. McLain, of the United States Entomological Station at Aurora, Ills., to make such investigation.

Mr. Wm. Muth-Rasmussen, of Independence, Calif., reports as follows for that State:

As far as I know, no vice-president has been appointed for California during the last two years. I can hereof only report for myself.

While the southern counties, according to all published reports, have had a very poor honey harvest, the season here has been about an average one. The reason is that while the southern counties depend almost altogether upon wild vegetation for bee-forage, our principal honey source, here, is alfalfa, which is irrigated and never fails to yield some honey. Although alfalfa is grown to some extent in the

southern counties, it is used there mostly as cattle-feed, and is cut as soon as the bloom appears, 4 to 6 times, according to the season. It is therefore of no avail to bee-keepers. Such hay is, however, not suitable for horses, being to "washy;" and as alfalfa is here used also for horse-feed, it is not cut until it has formed seed, or is nearly out of bloom. On a few farms alfalfa seed is raised for the market, and therefore our bees have the full benefit of the bloom while it lasts.

In "dry" seasons, when there is a scarcity of wild flowers, the alfalfa honey is stored in its purity, and equals any honey in color, flavor and body, being about as clear as white sage honey. In "wet" seasons it is, however, mixed with honey from other flowers, and is of an amber color. Our honey invariably granulates when frosty weather sets in, but until then it remains liquid, and will be so thick that a dish of it may be turned upside down, without its running out.

Alfalfa, if rightly treated, is, to my mind, equal, if not superior, to any other plant which can be cultivated for honey, hay and seed. The stubble also affords fine pasture for stock, but cattle are liable to become bloated, if allowed to graze on it while it is wet or frosted. This is the only danger that has to be guarded against. All grass-eating animals are exceedingly fond of it, whether it is green or cured. It also affords fine pasture for hogs and poultry. As the tap-root penetrates from 20 to 40 feet down into the soil, the plant is not affected by drouth, and, when intended for seed, is not irrigated. When it once has secured a "stand," it will hold its own forever after, re-seeding itself, and choking out, by its dense growth, all other plants which may attempt to share the soil with it.

I hope that you may have a pleasant and profitable meeting.

Mr. H. L. Jeffrey, Vice-President for Connecticut, gave the following report:

Connecticut has not produced over two-thirds as much honey this year as last (1884), and perhaps not over half the amount, last year being the best season for white clover and buckwheat that we have known for eleven years. It gave us two unusually good honey-flows, which made almost an incessant flow from May 8 to Sept. 27, or more than 140 days of average abundant honey-flow, against less than 50 days in 4 flows this season, with no white clover or buckwheat.

Though it has been common for well-cared-for colonies of bees of good blood to produce 100 pounds each, this year, it is also more common for the uncared-for "scrub" colonies to be deficient in winter stores, without yielding any surplus. Although Connecticut annually consumes from 100 to 125 tons of honey, and although bee-keeping is in a growing condition, yet it would be extremely difficult to collect 40 tons of surplus Connecticut honey. Judging the State by an effort

to obtain a close canvass of 13 towns, it gives only a return of 12,400 pounds, which is far less than half what the grocers sell in some of the towns. Learning that the local producers have customers, and retail their product, and that the store supply is almost exclusively an import (the production being from 40 to perhaps 70 tons as a minimum and maximum amount), and that well-cared-for apiaries of selected colonies will give a surplus of 100 or more pounds per colony, it shows that Connecticut is a remunerative location for the skilled apiarist.

Connecticut possesses a few well-read apiarists, but not one specialist, that I know of, as a honey producer. In all cases it is only a "side-show," and yet not a few could cast a vote on either the reversible frame, $4\frac{1}{4}$ section-box, skeleton honey-board, or on any of the other modern fixtures, and all of them tried extensively enough to warrant an impartial decision. One apiarist has tried the $1\frac{1}{2}$ -inch-wide end-bar, with the reversible wire, to the extent of 25 hives, and they have been tried to stay: there are about 150 of such constructed hives put into winter quarters, and trying a few by the side of other hives for 8 years, the number has gradually grown until another season will see a few thousand of the $\frac{3}{8}$ -inch-wide end-bar combs for sale cheap, or some kindling wood and wax in the place of the frames and combs. Saw $1\frac{1}{2}$ -inch thick plank in $\frac{3}{8}$ -inch thick strips, and make the tops and bottoms $5\text{-}16 \times \frac{3}{8}$, let into the ends, and use reversible wires, the hives to be $12\frac{1}{4}$ inches wide, with 2 division-boards scant $\frac{1}{2}$ -inch thick, confining the heat between each two combs to its own space. The advantages are, the prevention of hoar-frost at each end of the combs, the prevention of each comb being built to the end of the hive at every sudden flow of honey, the possibility to take out any one comb without being obliged to move each of the others separately, the convenience of moving a hive without every comb swinging against its neighbor, the ease with which a hive or nucleus can be set up in a hurry, as well as many other superior reasons.

This is the out-growth of some old cast-off Quinby standing-frames forced into use in 1877, by a sudden call for frames and hives, and from then until now they have been used as standing-frames at one time, and at another time as hanging-frames, by driving a nail in the end-bar; and sometimes one side being up, then the other side up, the twisting and turning for fun and for fact caused 5 complete hives after having wedge-sticks placed between the combs to be turned bottom-side up, in 1883, to get the crates of 18 prize-boxes each as the receptacles of about 3 inches deep of honey under the top-bars of all the combs, because the first crates of boxes were not taken off soon enough, and up went the honey. The same thing was tried in 1881, with 4 American hives whose combs were half full, and, lo, the honey was moved.

The objections to a stationary or single-position, spaced frame, are all converted into advantages by using it reversibly, and there will yet be living proof that the Quinby standing-frame, of the Langstroth size, and with reversible wires to combine the labors of Fathers Langstroth and Quinby in an established union of obliteration to the confused multitude, and give us all peace and sameness to perfection in frame and hive.

Mr. C. P. Dadant, of Hamilton, Ill., read the following, on

EXTRACTED HONEY.

Nothing is more appetizing than a pretty section of white comb honey. But comb honey will always be a fancy article, and will have to sell much higher than extracted honey, in order to pay the bee-keeper that produces it. The aim of bee-culture, in its progressive condition, is to produce honey for the masses—for the laborers—who cannot afford to pay for it any more than they can pay for the average grades of sugar.

Besides, comb honey, although it is a ready selling article, will not fill the place of liquid honey in a great many instances—to make pastry or cakes, or to use in teas, in case of sickness. It is therefore an evident fact that the sale of comb honey will always be limited, and that the sale of extracted honey will increase in proportion to its production, provided the bee-keeper will take pains to introduce the use of it among his neighbors. This we have ascertained personally by our own sales. In 1868 our sales of extracted honey of about 500 lbs., were difficult and slow; now, our crops of 10,000 to 35,000 lbs. are easily disposed of, and although the prices are lower than formerly, yet we find the producing of it to be a remunerative business. We sell more honey to-day in our town of 1,500 inhabitants than we could sell 20 years ago in the city of St. Louis.

We consider the production of extracted honey, exclusively, as of much advantage to bee-keepers, for a number of reasons, prominent among which are the following:

1. The apiarist who aims to produce honey only for his own use, can produce much more of this honey than of comb.

2. The outlay for combs, crates and boxes is not an oft-repeated expenditure, since when once supplied the stock remains.

3. The bees need much less watching. The almost total prevention of swarming by the production of extracted honey is no longer a matter of doubt. For this purpose, it is only necessary to provide the colonies with a large quantity of empty combs ahead of their needs. These combs are not wasted, but are preserved from year to year.

4. By the production of extracted honey, exclusively, an apiarist can take care of more than four times as many colonies, as he can by the production of comb honey; thereby enlarging his profits greatly, even if he

has to sell the extracted honey much cheaper than comb honey.

It would be a great mistake to imagine, as some have asserted, that there is already an over-production of honey. Honey of all grades is only getting to be a staple. We do not have to look back many years to the time when its sale was so insignificant that it was only *occasionally* quoted in the market reports of the large dailies. When honey is found as often as is sugar, molasses, or as butter, on the tables of the average farmer and of the average laborer; when it is found by the barrel or by the keg in our wholesale and retail groceries—then, and only then, can we say that we are producing as much honey as the country can use.

The "revolution in bee-keeping," of which Father Langstroth speaks, in his book, has taken place, but the bee-keeping fraternity is only beginning to find out all the advantages and all the growth which the bee-business must derive from this revolution.

C. P. DADANT.

Dr. Mason described his method of getting extracted honey, but complained that he could not get more than 65 pounds per colony. He was asked how many combs he used, and replied, "eight."

Dr. L. C. Whiting said, If you will "tier up" your hives, and use plenty of combs, you can get twice as much honey.

Mr. C. F. Muth could not comprehend how the Doctor could manage with so few frames. He wanted at least 10 frames for the brood-nest, and then another story for extracting. Even his bees, kept on the house-top in the city of Cincinnati, had given him averages double and even treble what Dr. Mason had obtained, and from hives in the country where they had not so far to fly, he got far more honey.

C. P. Dadant prefers large hives and gives to the bees a plenty of combs in advance of their needs. Honey should not be extracted until ripe. Many bee-keepers think that honey must be sealed before it is ripe. This is a mistake; honey may be ripe before it is sealed, and it may be sealed before it is ripe.

S. T. Pettit—If we leave enough honey in the hives, we do not have to feed sugar, which prevents that much honey being put upon the market, and relieves the market to that extent.

H. R. Boardman—I have given 8 empty frames to a colony of bees in the fall, fed them 50 lbs. of sugar syrup (two parts of sugar and one of water), and they built comb, stored the syrup and wintered well. I have done this with several colonies.

Mr. W. E. Clark said that the President had been the most successful producer of extracted honey in the East, and he would call on him to explain his methods.

Pres. Root, in response, said that it was perfectly true, as Mr. Clarke had said, that Mr. Doolittle's requisites for producing comb honey were just as applicable to the production of extracted honey. A good queen, for

example, was just as necessary for the one as the other. In both cases wise manipulation was needed, and it took a large amount of study to know what is wise manipulation. Certainly we must have large colonies of bees to gather the honey, then we must extract it at the time when it could be done to the best advantage and with the least hindrance to the bees. It was hard to lay down specific rules—every bee-keeper must be a law to himself, and find out the methods best adapted to his own locality. Experience must be bought by practice, and at considerable expense; he only hoped that it would not cost others as much as it had cost him. The secret of success lies in having plenty of workers at the right time, and in order to do this we must have good queens. Then comes the question of manipulation. We have had good results from extracting unripe honey, thus saving the bees the labor of ripening it, but the question is, will it pay to do this? I think not. Then, again, there is spring manipulation; spreading the brood, and the like.—In my opinion, we have manipulated many a colony to death. I am getting to think less and less of manipulation. In feeding, we look, not at immediate results, but at the future. We have heard much about adulteration, and we must avoid the very semblance of it. Our product must be even above suspicion. Some of the lower grades of honey are selling so low that it will not pay to sell it and buy sugar.—Bees should never be allowed to "hang out" during a honey harvest; if they do, something is wrong. Our hives have a ventilator, 6x12 inches, in the bottom, which can be opened or closed at pleasure.

Mr. S. T. Pettit gave his experience in producing extracted honey. He had missed it by not leaving the honey in the hive long enough to ripen. One season his honey was all of an inferior quality, owing to this cause. He did not believe that we could ripen the honey as well as the bees themselves do it. He said that we should have at least one-third of the honey capped before extracting, and he believed it was better if all was capped over. He then asked: Do you think, Mr. President, that you can ripen honey artificially as well as the bees can do it?

President Root—I am not sure. I know we can ripen it more thoroughly, and I can discover no difference in the taste.

S. T. Pettit—Some have not as keen a sense of taste as have others. I have ripened honey artificially, but it never had the fine, rich, oily, aromatic flavor which honey ripened by the bees had. It is my opinion that bees add, in the ripening process, some animal product (formic acid, perhaps), which the honey can get in no other way.

Rev. L. L. Langstroth did not know that he could add much to the ocean of intelligence that was tiding all around, but he wished to say a word or two. He believed there were many things that the bees could do—certain things better than we can—and ripening honey was one of them. There

was too much artificial work in bee-keeping. One bee-keeper had invented nippers to pull dead bees out of the cells, but live bees would do it better.

Dr. Mason said that the "big-bugs" of the Convention had been poking fun at him for getting only 65 pounds of honey per colony, but they would find it impossible to get an average of 300 pounds in his locality—a city on one side and a wilderness on the other. Small as his average yield was, it was larger than that of any of his neighbors. He wished that his critics would show him how to produce 300 pounds per colony, but the trouble was as Mr. Clarke said, they did not to disclose their secrets.

Rev. W. F. Clarke wished to ask if formic acid in honey was not the element which gave it its keeping qualities. He put the question to Prof. Cook. For his own part, he believed that the formic acid was added by the bees in the capping process, which was carried on mainly by the use of their tails—the sting—being the last polishing tool. It was because the formic acid was thus added that honey must be one-third capped to be good, and all capped to be first-rate.

Prof. Cook thought that no one knew how or when the formic acid was added. He was also of the opinion that too much stress was laid on the matter of taste. Few could discriminate as thoroughly as had been suggested.

Mr. C. F. Muth, of Cincinnati, Ohio, read the following on

THE HONEY MARKET.

A friend asked me, a few days ago, as many had done before, what the reason was for the low prices of honey, whether, in my estimation, honey would remain cheap, whether I thought bee-keeping was overdone, etc. I admit that these are vital questions for us bee-keepers, and it is very proper that we should consult as to the best *modus operandi* as to the improvement of our condition and to elevate our business.

We know from experience that whenever prices are on a level with, or below, the cost of production—no difference whether this is in the line of produce or manufacture—margins are unsatisfactory for producers and manufacturers as well as for dealers. Wheat, corn, pork and barley were very low for a number of years; farming was very unprofitable, and the proportion of failures among grain-dealers and pork-packers was perhaps greater than ever. Bee-keeping was perhaps not more satisfactory than farming; yet, in proportion to its labor and investment, it was far more remunerative, even if the prices of extracted honey ranged between 3 cents and 8 cents per pound, and that of comb honey between 6 cents and 12 cents per pound.

It is bad policy to give up, because we find just as many malcontents in other branches, if we look around us, and it is folly to consider ourselves

privileged characters. To indicate our true position, and how to govern ourselves accordingly, is the object of this essay.

It is not over-production which is troubling us, as there was never so much honey consumed as during the past year; but still, less was produced. Our crop was a short one in most parts of the country. Now, if values are governed by supply and demand, this question is proper, viz., "What causes the present low prices?"

The maxim that there is no rule without an exception, may be applied to our case under the rule of supply and demand. The low average value of all produce and manufactures, besides the lack of all speculation in our markets, is, in my estimation, the first cause of the depression of the prices of honey. When times become better, i. e., when a general advance in values takes place, prices of honey will advance with the rest.

The next factor in the depression of prices is adulteration. It is an established fact that extracted honey has become a staple article. A large number of manufacturers using sweets have found that pure honey is the best and cheapest sweet they can get. New converts are made daily. For an illustration I will mention a late case of my own. I have sold, for years, an occasional barrel of honey to pork-packers, but only one would buy with something approaching a regularity. He found that his New Orleans molasses, at times, not sweet enough, while the same quantity of honey would always answer for the same cask of pickle. I sold him 50 barrels of honey for curing meats, a few weeks ago. Other packers having heard of the purchase, bought a few barrels for experiment, and one of them approached me with: "Why didn't you tell me about your honey?" "There will be a great deal more honey-cured hams and honey-cured breakfast bacon in our city next season than during the present one. There is no doubt about it; and my next experience will be that some drummer from Boston, New York, Philadelphia or Chicago, will be around and sell to my friends his glucosed honey $\frac{1}{2}$ cent less per pound than they paid me for pure honey. They will buy, and the following season some one will say: "Honey is not much sweeter than New Orleans molasses after all." Such has been my experience before; it will repeat itself. We cannot avoid unfair competition, and there is no harm in telling it. Glucose is made to cheat, and there is money in adulteration. Glucose swells the so-called stock of honey on the market, damages the good opinion entertained of honey, in the estimation of consumers, and brings down the price as a natural consequence. There is no use for me to tell you how to meet adulteration, because every one of us is possessed of more or less of selfishness, and apt to pursue his own course under any circumstances.

There is, perhaps, a third cause for the low price of honey, which should also be mentioned. It is, that very

many of our nearest neighbors are not yet aware of the fact that honey is a sugar, and can be substituted for cane-sugar in almost every instance. See that our friends are posted on the subject!

Having shown in the above that the production of and traffic in honey has its reverses, the same as any other branch of business, permit me now to give some points by which we may promote our interests.

Cleanliness around and about eatables makes a good impression upon consumers. We must exercise cleanliness about our apiaries, about our honey, about extractors and extracting. Every quality of honey should be kept by itself, as nearly so as is possible, because most of our manufacturers make a certain grade of goods with a certain flavor with which the taste of their customers has been cultivated; to lose this flavor means the loss of the custom. I have lost several hard-earned customers because I was unable to supply the same flavor, although with hundreds of barrels of honey on hand. They would resort again to cane-sugar as the only means by which to manufacture a regular grade of goods. My latest experience in this direction were my loss of custom for the man-grove honey of Florida. When my supply was exhausted, it was cane-sugar that took its place in the majority of cases, and it will be hard to regain that custom.

Honey should stand in open vessels for evaporation when it comes from the extractors, and be thoroughly skimmed before it is barreled or canned. No lumps of comb, wax, or specks of other impurities should remain in the honey, as nothing is more annoying to manufacturers. They make no allowance for want of cleanliness, but refuse the honey. A sale is often spoiled when the honey is put up in whisky barrels. The inside of the staves were charcoaled, and it is almost an impossibility to separate the specks of charcoal from the honey. Clean barrels for honey every time—or shippers must bear the consequences.

When putting up honey, bee-keepers should at once select packages to suit their trade. If their honey is calculated for the wholesale trade, good, strong cypress, oak or poplar barrels are their best and cheapest packages. I prefer barrels to all smaller packages. Other dealers may require half-barrels or kegs for their trade; but, as stated above, care should be taken by every bee-keeper to have his extracted honey graded, not only according to color, but also according to flavor. I prefer to put up my own small packages to suit my jobbing and retail trade; these are tin pails of 50, 25, 10, 5 and 3 pounds, and square glass-jars holding 2, 1, $\frac{1}{2}$ pound and 5 ounces, respectively. I have an excellent retail trade for square glass-jars, for which nothing but the best clover honey will answer the purpose.

In regard to comb honey, I should say that it must be white and well capped to find a ready sale; if the

quality is clover, it is all the better. One-pound sections sell best, but half-pound sections, if well filled, find a ready sale, as do also two-pound sections. No sections should be glassed; but 20 to 30 pounds of honey in neat sections, placed in a neat case with glass on each side, meets with no objection whatever, while sections in the neatest paper-boxes or glassed, are unsalable by the side of it.

Purity, cleanliness and neatness are attractions which should be synonymous with the marketing of honey, and a strict adherence to this principle cannot fail to secure consumers.

C. F. MUTH.

After the reading of the essay, some one asked Mr. Muth what size of section was, with him, the most salable.

C. F. Muth—The one-pound section.

Geo. E. Hilton—I have used sections 5x6x1½ inches, and they weigh 1¼ pounds when filled. I find them very salable.

S. F. Newman—If Mr. Muth had only large packages, would he not sell just as many of them as of smaller ones?

C. F. Muth—One-pound sections sell the best. A great many want to buy a "pound" of honey.

James Heddon—I think it will be an injury to bee-keepers to lead them to use any other size of section than the 1¼x1¼. A pound is a good size. My fixtures are adapted to that size. Suppose some one should invent a new style of section, how much better it would be if we all used the same size; how much cheaper they could be furnished us. A comb with a large surface is more attractive, but it will not bear shipment so well; however, if we get the sections well filled and the combs attached all around, as can be done by reversing the sections, a thin comb will bear shipment very well.

C. R. Isham—Honey was much more salable when we were using large sections. Bee-keepers themselves are to blame for the necessity of using small packages. By using large packages more honey is sold at each sale.

T. G. Newman remarked that we needed various sizes to accommodate consumers—but he found the sections holding one-pound by far the most salable.

A. E. Manum—Two years ago I shipped 15 tons of one-pound sections, and 2 tons of two-pound sections. I received returns for the pound sections in a very short time; but it was several months before the two-pound sections were sold. If there was only one size of section used, people would be surprised at the price at which it could be furnished.

James Heddon—I do not know as I would have everybody use pound sections. I have used thousands of half-pound sections; I can secure just as much honey, and have sold it at an advance of 3 cents per pound. I prefer sections that are 7 to the foot, even when separators are used.

Pres. Root—I have found upon a careful examination of the markets,

that we need sections of different sizes.

The President called on Mr. T. G. Newman who gave the following on

APICULTURAL NECROLOGY.

Mr. President, Ladies and Gentlemen:

Since last I had the pleasure of meeting with this Continental Society of Apiculturists, many of those who have been our companions in these assemblies have passed from the present state of being, and we are now deprived of their glad some greeting and hearty welcome. Much as I would like to mention all their names in tender remembrance, I find it impossible, because in many cases the surviving friends have not communicated the facts to the apicultural public. Allow me, with affectionate regard, to mention a few of the most prominent of our brothers of America and Europe, who, during the past four years, have been added to that vast army now numbered with the dead!

Of these, four were editors of our bee-periodicals, who had, during their lives, done much to raise apiculture up to its present "standard of excellence," devoting the best energies of their lives to its development and advancement, often sacrificing their ease, comfort, physical strength and wealth to their favorite pursuit. It is true that each one fought a "hard battle"; they were often severely criticised, and sometimes strongly condemned by those who should have been their constant friends and co-laborers. While admitting that they often erred (for "to err is human") let us cast "the mantle of charity" over "their short-comings," and think only of their good deeds, energetic work, unselfish lives, and the general nobility of their characters!

I will now "call the roll" of those over whom death has triumphed:

A. F. Moon, of Rome, Ga., was one of the founders of this Society, and in the absence of the Rev. L. L. Langstroth, its first President, Mr. Moon presided over the Convention. He was the editor of the *Bee World*, and died on Aug. 2, 1882; aged 58 years. He commenced to keep bees when 11 years of age, and ever after gave the fullest energies of his mind to the advancement of practical bee-culture.

Rev. Jasper Hazen, Woodstock, Vt., after 25 years of progressive bee-culture, died on April 13, 1882, aged 92. He strenuously advocated the use of surplus honey-boxes, invented a hive, and welcomed the introduction of the Italian bees. He was also a vigorous apicultural writer 20 years ago.

Edward Townley, of Cincinnati, O., died in the 80th year of his age, in July, 1882. He commenced to keep bees in 1850, and built up a large apiary at Mt. Auburn. He was the author of a book on bee-culture, and devoted his energies to apiculture.

Jesse C. Estlack, of Littleton, Colo., died on Aug. 5, 1885, at the age of 64. He went from New Jersey to Colorado in 1859, and there established

an apiary in which he took much delight.

Theodore Houck, of Canajoharie, N. Y., died on June 16, 1883, at Denver, Colo., whither he went on account of failing health. He was one of the editors of the *Bee-Keepers' Exchange*, and was never happier than when among his bees. The last Convention he attended was at Albany, N. Y., in January, 1883, and was one of its most energetic members. His age was 26.

E. F. Cassell, of Illinois City, Ills., was killed on Oct. 6, 1883, while attempting to board a moving train. He had been a prominent and enthusiastic bee-keeper for 15 or 20 years.

William Howlett, of Beaver Lick, Ky., was killed by lightning on May 19, 1884, while at work on his farm. His apiary contained 125 colonies of bees. He attended the Cincinnati meeting of this Society, and took part in the deliberations.

D. S. Given, of Hoopeston, Ills., the inventor of the Foundation Press, died at the age of 40, on July 10, 1884, at Los Angeles, Calif., whither he had gone for his health. His kind disposition endeared him to all who knew him, and his name will go down to posterity as one who did his part to make apiculture practical.

John Madden, of Davenport, Iowa, was thrown from his wagon and killed on Sept. 19, 1884. He was one of the organizers of the Eastern Iowa and Western Illinois Bee-Keepers' Association, and was filled with energy and enthusiasm. There were 225 carriages in his funeral procession (10 being filled with apiarists); this proves how much he was beloved by those who knew him.

William W. Cary, of Colerain, Mass., died on Dec. 9, 1884, in the 70th year of his age—full of years, ripe in experience, and faithful in friendship. At the time of his death he had some 300 colonies of bees. He was intimately connected with the first importations of Italian bees into America, and was the faithful co-worker with Father Langstroth, in all his efforts to revolutionize bee-keeping in America.

R. M. Argo, of Garrard Co., Ky., died of congestive chills, on Feb. 13, 1885. As one of the pioneers of modern apiculture, he wrote extensively some 20 years ago. He was a well-posted and practical bee-keeper, and reared many very fine queens.

William Williamson, of Lexington, Ky., died on Feb. 13, 1885, at the age of 40. Those who attended the meeting of this Society at Lexington, in 1881, will witness to his zeal and enthusiasm, as well as his whole-souled disposition. He was one of the projectors of the International Congress at New Orleans, but died just before it convened.

Rev. Herbert R. Peel died in England, on June 2, 1885. He was the editor of the *British Bee Journal*, and Secretary of the British Bee-Keepers' Association. In his death our English brethren have sustained an irreparable

able loss. He was a firm friend, an indefatigable worker and a progressive apiarist.

Prof. Von Siebold died in Germany on April 7, 1885. He was the faithful friend of Father Dzierzon, and was one of the first to accept the theory of parthenogenesis. He was a prominent scientist, and rendered much assistance to the development of rational bee-culture.

Prof. Andreas Schmidt, for 20 years editor of the *Bienen-Zeitung*, the leading apicultural publication of Germany, is also numbered with the dead. He was a co-worker and an ardent admirer of Father Dzierzon, whose Golden Jubilee was celebrated in Germany last September with great enthusiasm. In his death our German brethren have lost a master mind, a thorough scholar, an energetic worker, and a faithful friend.

There are many, many others—but time would fail me to speak of all those who through faith in scientific research, and devotion to experiments and manipulations, have helped to dispel the darkness and scatter the light,—as if by "magic wand" commanding modern apiculture to "arise and shine"—pulsating and luminating every zone!

Men pass away! Monuments crumble into dust! and all that remain of human greatness, are thoughts and deeds. By these we may "lay up treasures where moth and rust cannot corrupt." In death we take nothing with us but that which we really are! Shrouds have no pockets! Coffins no coupon-drawers! Crowns fall off at the touch of death! Stripped of our robes of state, insignia, uniforms and decorations, we then shall stand for just what we are!

Our best thoughts and noble deeds, given to the world by the aid of the printed page, may live on and energize a world after we are crumbled to dust. True men *live*, long after they have passed from this stage of action. The ponderous steam-engines which brought this Convention together, are but the spirit of James Watt living again in our very midst! Modern apiculture is but the embodiment of the thoughts and lives of those who have gone before us; and our thoughts and work, which may add to its practicability, may live on after we are gone!

The second President of this Society—the lamented Moses Quinby (than whom apiculture never had a truer and more unselfish friend), now, in this very assembly, *lives again* in those who are practicing his thoughts, theories and progressive methods of bee-culture; as well as in those who love him for his scientific research, grand character, and noble life!

That band of brothers whose names we have to-day inscribed on our "Roll of the Honored Dead," *live again* in our tender remembrance, and we may almost seem to catch a glimpse of "the Angel of Life," with open scroll, recording their names with the plaudit—"Blessed are the dead;"—

"they rest from their labors and their works do follow them."

"Breathe soft and low, O whispering wind,
Above the tangled grasses deep,
Where those who loved me long ago
Forgot the world and fell asleep.
So many voices have been hushed,
So many songs have ceased for aye,
So many hands I used to touch
Are folded over hearts of clay.

"I only know that, calm and still,
They sleep beyond life's woe and wall,
Beyond the fleet of sailing clouds,
Beyond the shadow of the vale.
I only feel that, tired and worn,
I halt upon the highway bare,
And gaze with yearning eyes beyond—
On fields that shine supremely fair."

THOMAS G. NEWMAN.

Prof. Cook remarked that he was very much interested in the subject, and remembered with pleasure many meetings when those mentioned by Mr. Newman had been present. He spoke particularly of Mr. Moon, the original projector of the National Society, and Mr. Williamson, who so nobly managed the entertainment of the Society at Lexington, Ky. He moved a vote of thanks to Mr. Newman for placing their names and history before the Society, and also that it be spread upon the minutes. Carried unanimously.

PASTURAGE FOR BEES.

M. D. York—I have basswood trees that were transplanted a year ago last spring, that blossomed full this year. I have transplanted a tree 3 inches in diameter.

E. L. Hubbard—Will it pay to use land worth \$50 an acre to raise honey-producing plants?

T. G. Newman—In my opinion, it would.

M. D. York—I have raised Alsike clover upon land worth more than \$50 per acre, and the seed alone paid me \$25 per acre.

Mr. E. L. Hubbard mentioned a plant that grew a few miles south of Buffalo, N. Y., that was an excellent honey-plant.

Mr. Hiram Chapman described the plant as resembling plantain. A specimen of it was exhibited.

Dr. L. C. Whiting—It would be a most excellent and promising plan if some young men would go to work with our red clover, in the way pointed out by Mr. E. E. Hasty, and develop a strain with short tubes.

James Heddon—I do not think it will ever be profitable to raise honey-plants on land worth \$50 per acre. Where there are waste-places it may pay to scatter the seeds of honey-plants. One plant that I would recommend is what is called "pleurisy root."

MISCELLANEOUS.

The Secretary read a letter from Mr. Turner Buswell, of Solon, Me., asking the Society to consider the advisability of publishing, in a pamphlet form, a report of its proceedings, and the matter was referred to the committee on questions.

Pres. Root—I have requested that samples of honey be sent to me, that I might send them to the government chemist, Prof. H. W. Wiley, at Washington, for analysis; but the report that the Professor has already made of samples of honey that he has analyzed, leads me to doubt the advisability of such a course. Too large a percentage of the samples were pronounced impure. I should not like to send my honey there and have it pronounced adulterated.

C. F. Muth—Myself and some friends sent some honey there that we *knew* to be pure, and it was pronounced *impure*. I do not think that we shall send any more.

Prof. A. J. Cook then read a portion of the published report of Prof. H. W. Wiley, of the Department of Agriculture at Washington, giving his analysis of different samples of honey furnished him by bee-keepers. In his annual report he put down many samples as "apparently pure," and many as "probably impure." The Professor said that it was the business of a chemist to *know*; and if he could not analyze such products to a certainty, he should say so in his report.

QUESTION BOX.

The committee on questions reported as follows:

Will it pay to raise red raspberries for pasturage on land worth from \$100 to \$150 per acre? Yes, if the crop of berries also paid.

What is the smallest amount of honey needed for winter stores for a strong colony, and what is the best kind of honey to use? Fifteen to 40 pounds of well-ripened honey.

What per cent. of those entering bee-keeping succeed? Two per cent.

Will thin combs, in sections, sell as well as thick ones? Yes.

Shall we use separators? Yes, if you cannot get straight combs without them.

How shall bees by the pound be placed upon combs? Place the queen on the combs, then shake the bees on the combs.

What shall be done with honey-dew? Sell it, or feed it sparingly to the bees in the spring.

Is a coal-furnace objectionable in a cellar where bees are wintered? We do not think favorably of it.

What width of sections is best? One and one-half to 1½ inches without separators; 1½ to 2 inches with separators.

Has the queen been seen depositing drone-eggs? This committee has not seen her doing so.

Are queens reared from transferred larvae as good as any? Yes.

How are the Carniolans regarded? Favorably, except excessive swarming.

Will reversing combs secure the destruction of queen-cells. Report says yes.

H. R. Boardman, S. T. Pettit, S. F. Newman.
Committee on Questions.

The committee on exhibits reported the following articles on exhibition:

M. H. Hunt, Bell Branch, Mich.—A chaff hive, one-piece V-grooved sections, and extracted honey in glass cans and jars.

Will Ellis, St. Davids, Ont.—Thick and thin comb foundation, and sections.

Reynolds Bros., Williamsburg, Ind.—Sample of fine flavored and light colored fruit-bloom honey.

Berlin Fruit Box Co., Berlin Heights, O.—A crate of 500 one-piece, sliced, V-grooved sections; section-case to be used with or without separators; veneer separators, top feeder and strawberry baskets.

G. W. Stanley & Bro., Wyoming, N. Y.—An automatic, vertical-geared honey-extractor; much improved on those formerly made.

Dr. A. B. Mason, Wagon Works, O.—Blocks of candied honey on plates, sweet clover, form for nailing frames, wiring-board, reversible frame, and a machine for making holes in frames for wiring.

Chas. F. Muth, Cincinnati, O.—A variety of his improved, all-metal smokers.

J. Van Deusen & Sons, Sprout Brook, N. Y.—A large quantity of thick and thin foundation, both wired and unwired.

Frank A. Eaton, Bluffton, O.—A section-case for use without separators, and a case of 56 one-pound sections of white clover honey.

Chas. Dadant & Son, Hamilton, Ill.—Samples of heavy and thin foundation varying in weight from 5 to 11 square feet to the pound.

Amos A. Ressler, Sandersburg, Pa.—Extracted locust honey.

Prof. A. J. Cook, Lansing, Mich.—Extracted white clover honey, and a sample of plant-lice honey from northern Michigan.

E. J. Cook, Owosso, Mich.—Extracted basswood honey.

Hiram Chapman, Versailles, N. Y.—Some heads and seeds of a new honey-plant (name unknown), and honey from the same.

J. J. Bradner, Findlay, O.—One-piece V-grooved sections.

John Rey, East Saginaw, Mich.—Extracted honey in glass jelly-pails.

Newman Bros., Norwalk, O.—Several cans of extracted honey.

W. E. Clark, Oriskany, N. Y.—Dovetailed white poplar, and nailed spruce sections; frame-spacers, Quinby hive-clasps, Van Deusen feeders with brackets, Quinby's new bee-keeping revised by L. C. Root, and a quantity of Quinby smokers from 2 to 3½ inches.

Geo. E. Hilton, Fremont, Mich.—White comb honey, gathered from a plant on the Michigan river, known there as "cleaver;" extracted basswood honey, and large photographs of residence and apiary.

D. A. Jones, Beeton, Ont.—Large variety of labels for both comb and extracted honey; very smooth one-piece sections as they came from the saw; nine different widths of one-piece sections, a reversible honey-crate for use on the hive, and for shipping any sized sections; sections slotted on four sides, section-case for any width sections, slotted queen-excluding honey-board, new gearing for honey-extractor to permit the instant removal of comb-basket; a double and a single Benton shipping queen-cage, Canadian bee-feeder, winter feeder for "Good" candy, zinc honey-board and queen-excluder.

Jas. Wales, Belleville, Ont.—Fine specimen of honey-cake.

E. Nutting, Kent, O.—Drone-trap.

H. D. Davis, Bradford, Vt.—Surplus and section shipping-case, and four-piece dovetailed sections.

Rev. W. F. Clarke, Guelph, Ont.—His renowned hibernating hive stand.

Bingham & Hetherington, Abronia, Mich.—Honey-knife.

E. S. Miller, Dryden, Mich.—A Falkner chaff-hive with wintering and surplus arrangement, and a perforated-zinc queen-excluder.

P. L. Viallon, Bayou Goula, La.—Comb built by Mexican honey-wasps.

Joshua Bull, Seymour, Wis.—Extracted honey.

There was also on exhibition some 2-ounce sections of comb honey from W. Harmer, of Manistee, Mich.

A. B. Mason, G. B. Hall, G. M. Doolittle, Committee on Exhibits.

Local Convention Directory.

1886. Time and place of Meeting.

Jan. 8.—Northern Ohio, at Wellington, O.
H. R. Boardman, Sec., E. Townsend, O.

Jan. 12.—Cortland Union, at Cortland, N. Y.
W. H. Beach, Sec., Cortland, N. Y.

Jan. 13—15.—Nebraska State, at Lincoln, Nebr.
W. F. Wright, Sec., Johnson, Nebr.

Jan. 19.—N. W. Ills. & S. W. Wis., at Freeport, Ills.
Jonathan Stewart, Sec., Rock City, Ills.

Jan. 19—21.—Maine, at Skowhegan, Me.
Wm. Hoyt, Sec., Ripley, Me.

Jan. 20, 21.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.

Jan. 20, 21.—N. E. Ohio & N. W. Pa., at Meadville, Pa.
C. H. Coon, Sec., New Lyme, O.

Jan. 21.—Champlain Valley, at Middlebury, Vt.
R. H. Holmes, Sec., Shoreham, Vt.

Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Good Report.—Wm. Curran, (3—10). Littleport, Iowa, on Dec. 12, 1885, says:

I commenced the season of 1885 with 3 colonies of bees, and increased by natural swarming so I now have 10 well constituted colonies, from which I extracted 436 pounds of honey. The basswood yielded this year. My honey is all from white clover. I obtained very little fall honey, though I did well enough, considering my experience.

Hard Winter Expected.—W. H. Pudney, Sherburne, N. Y., on Dec. 14, 1885, says:

I think that we are going to have a hard winter for bees. I had 4 colonies last spring, have increased them to 12 colonies, and obtained 300 pounds of comb honey. I did not have the time to work with them as I would wish.

Report for 1885.—S. H. Waggoner, Godfrey, Ills., on Dec. 18, 1885, says:

I commenced the season of 1885 with 30 colonies of Italian bees, and increased them to 50, by natural swarming. I obtained about 1,000 pounds of honey in sections, and 500 pounds of extracted honey. I have 47 colonies in winter quarters in good condition.

Black Locust Honey, etc.—N. H. Rowland, Keene, Ky., on Dec. 9, 1886, writes:

I have 45 colonies of bees, about half of which are prepared with chaff cushions, as I always prepare them, and the other half being just as they "fixed" themselves, with frames in both stories of the hives. I have lost but 3 colonies in 4 years, and that was caused by mice. The past season was a very poor one, the white clover having been killed to a considerable extent, it yielded but little honey. The black locust bloomed profusely,

and from that source I obtained as much as 90 pounds each from strong colonies. From 30 colonies, spring count, I obtained over 1,500 pounds of the finest honey that I ever saw. I sold all the honey I had to spare before I was hardly through taking it from the hives. I have built up a home market that takes all the honey that I have to dispose of.

Wintering Bees.—A. A. Stewart, of Lynnville, Ont., writes as follows:

I had 3 colonies of bees packed on the summer stands, and about Dec. 1 I noticed that the mice were troubling one of the colonies. I unpacked and removed all 3 colonies upstairs in my store house, leaving plenty of ventilation, the entrances open, and I covered the back, top and sides with chaff. How will they winter? Did I do well in moving them? They are very strong in bees, and the hives are very heavy with honey.

[It is my opinion that the wintering problem does not hinge directly upon any of the points which you bring forward in your statement of what you have just done with the 3 colonies. If the remainder of this winter is going to be as warm as the part just passed, it would have been best to have allowed them to remain as they were on the summer stands; but if we are to have a repetition of last winter, you did best by moving them, especially if the temperature of the room they now occupy will not go below 45° Fahr. Keep up the temperature of the room as above, and I predict success.—JAMES HEDDON.]

Bee-Interests Advancing.—W. F. Wright, Johnson, Nebr., on Dec. 12, 1885, writes:

The bee-interests of Nebraska are advancing, notwithstanding the back-set that bee-keepers received last winter. The AMERICAN BEE JOURNAL is the best I have seen out of a half-dozen bee-papers, and with only 20 colonies of bees I cannot do without it the coming winter. Our annual Farmers' Institute meets on Jan. 19, 1886, and continues for 4 days.

Arranging an Apiary.—J. W. Margrave, Hiawatha, Kans., on Dec. 13, 1885, writes:

I would like to describe the arrangement of my apiary the last season. It may be old, but it was new to me. I laid it out in the form of a hollow square, placing the hives 5 feet apart from centre to centre, all facing outward; then I could do my work in the apiary and be all the time behind the hive, and not, as heretofore, stand behind one row and in front of the next row. I never like to insult a colony of bees by standing in its doorway, for two reasons, viz., first, I think it very impolite to do so, and second, the bees often have a very sharp way of resisting such imper-

tinence. If I had more hives than would fill the entire square, I would form a second square inside of the first, only reversing the entrances, having them face inward. Then I could pass around the entire apiary and be in the rear of each hive. I paid particular attention during the season, and could detect no difference in those facing north from those facing to the east, or indeed any of the others; all did about equally well where the internal conditions were the same. I think that the plan is a good one, especially where one is limited for room, as a great many colonies could be kept in a very small space.

Experience in Bee-Keeping.—J. P. Hensley, Grand Island, Neb., on Dec. 11, 1885, says:

My experience in bee-culture for the year 1885 is as follows: I commenced last spring with 1 colony, increased to 4, by division, and obtained only about 10 pounds of honey. I have packed them for the winter on the summer stands with oat-chaff. I had to feed out one-half sugar syrup for winter stores. The last flight they had was on Dec. 4. I think that I shall see 4 live colonies in the spring in fair condition; at any rate I shall make my little report in the spring; but one thing I shall not do, i. e., I will not unpack them as soon as I did with my only colony of last spring. I am new in the business, but I have read the BEE JOURNAL very carefully, and I think I have profited by it, and by what practice I could get, and at the same time attend to my business.

The Season of 1885.—W. Stout, Delaware City, Del., on Dec. 14, 1885, writes:

Last fall I had 10 colonies on the summer stands, and all came through the winter in good condition. First swarms came out on the last day of May and June 1, but the spring was so cold, with high winds. There seemed to be no nectar in the clover, so I did not obtain more than 150 pounds of clover honey. The fall flow began about Sept. 1, which was 3 weeks behind the usual time; it gave me 150 pounds more of comb honey and 100 pounds of extracted. I increased my apiary to 15 colonies and 1 nucleus. I hope that next spring will be earlier than the last was, for when we have a backward spring in this locality we generally have a failure of spring honey, as we have no bass-wood to fall back upon, but have to wait until fall. I hope for better things next year.

System and Success.

All who intend to be systematic in their work in the apiary, should get a copy of the *Apiary Register* and commence to use it. The prices are as follows:

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (230 pages).....	1 25
" 200 colonies (430 pages).....	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

Convention Notices.

The annual Convention of the Indiana State Bee-Keepers' Society will be held at Indianapolis, Ind., on Jan. 20 and 21, 1886. The meetings of this Society have been very successful in the past, and the coming meeting promises to be still better. The meeting will be held in the rooms of the State Board of Agriculture, and it is one of a series of meetings held by the different Societies of the State, which pertain to the specialties of Agriculture, viz., Dairying, Wool-Growing, Swine-Breeding, Poultry-Raising, etc. Reduced rates are offered at Hotels, and everything possible will be done to make the meeting entertaining and instructive. A very complete program is being prepared, with ample time to discuss the important subjects of particular interest to bee-keepers. A cordial invitation is extended to all bee-keepers, with the hope that they will attend, and thus make the Convention of still greater importance.

FRANK L. DOUGHERTY, Sec.

The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Union Hall at Cortland, N. Y., on Jan. 12, 1886, at 10 a.m. It is hoped that all interested in apiculture will make an extra effort to be in attendance at this meeting. Those unable to attend this meeting are requested to send to the Secretary, reports of their apiaries from May 1, 1885, to Dec. 1, 1885.

W. H. BEACH, Sec., Cortland, N. Y.

The next meeting of the Maine Bee-Keepers' Association will be held at Skowhegan, Me., on Jan. 19, 20 and 21, 1886. The Maine Central R. R. will sell tickets at one fare for the round trip. The Grand Trunk R. R. will sell tickets at the same rate to Lewiston, Me., to all who attend the meeting. Bee-keepers everywhere are cordially invited to be present.

WM. HOYT, Sec.

The Northern Ohio Bee-Keepers' Association will hold a meeting in the Baptist Hall, in Wellington, O., on Friday, Jan. 8, 1886. A special effort will be made to secure a full attendance.

H. R. BOARDMAN, Sec.

The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Freeport, Ills., on Tuesday, Jan. 19, 1886.

JONATHAN STEWART, Sec.

The annual meeting of the Champlain Valley Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 21, 1886.

R. H. HOLMES, Sec.

The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association will hold its seventh annual convention at Meadville, Pa., on Wednesday and Thursday, Jan. 20 and 21, 1886.

C. H. COON, Sec.

Honey as Food and Medicine.

To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, \$2.50. Five hundred will be sent postpaid for \$10.00; or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Dec. 28, 1885.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—The market is without special change since last quotations. White comb honey in one-pound sections brings 15¢@16¢. A little fancy sells at 17¢ in a small way. Dark comb honey sells slowly. Nearly all of the white comb honey comes from the East. Extracted is held firmly at from 8¢@8¢.

BEESWAX.—25¢.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for comb honey is very flat and inactive, which we attribute to the continued warm weather, and prices are ruling correspondingly. We quote as follows: Fancy white comb in 1-lb. paper cartons, 14¢@15¢; the same in 1-lb. glassed or unglazed sections, 13¢@14¢; the same in 2-lb. glassed sections, 10¢@12¢, and in unglazed 2-lb., 12¢@13¢. Buckwheat honey in 2-lb. sections, 8¢@10¢; in 1-lb. sections, 11¢@12¢. Extracted—white clover, 6¢@6¢; buckwheat, 5¢@5¢.

BEESWAX.—Prime yellow, 25¢@26¢.

MCCAUL & HILDETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10¢@12¢. Extracted, in barrels, 4¢@5¢. Extra fancy of bright color and in 1-lb. packages, 1/4 advance on above prices.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4¢@5¢. Supply and demand is fair for choice comb honey in small sections, which brings 12¢@15¢ per lb.

BEESWAX.—Good yellow is in good demand, and arrivals are fair at 20¢@22¢ per lb.

C. F. MUTH & SON, Freeman & Central Aves.

CLEVELAND.

HONEY.—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15¢, and 2-lb. for 13¢@14¢, but there is not so much sale for the latter. Second grade honey is dull at 12¢@13¢. Old white, 10¢@12¢. Extracted, 7¢@8¢ per lb.

BEESWAX.—Very scarce at 22¢@25¢.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The demand for honey begins to sag under the present comparatively high prices, and recent warm weather, though choice 1-lb. sections are still scarce and pretty well taken up at 16¢@17¢. We think, however, that the top is reached and any change will be lower prices. Two-lb. sections are selling at 12¢@15¢. Extracted, dark, 4¢@6¢; white, 7¢@8¢.

BEESWAX.—22¢@25¢.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make sales. We quote comb honey in 1-lb. sections at 14¢@16¢, and 2-lb. sections at 12¢@14¢. Extracted, 6¢@8¢.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10¢@12¢; amber, 7¢@8¢. Extracted, white liquid, 5¢@5½¢; light amber colored, 4¢@4½¢; amber and candied, 4¢; dark and candied, 4¢@4½¢.

BEESWAX.—Quotable at 23¢@25¢, wholesale.

O. B. SMITH & CO., 423 Front Street.

Bee-Keepers' Badges at Fairs.



We have some ELEGANT RIBBON BADGES, having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

THOMAS G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.